



Atty. Dkt. No. 039262-0142

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Tadahiro OHMI, et al.  
Title: PATTERN WRITING SYSTEM AND  
PATTERN WRITING METHOD  
Appl. No.: 10/552,731  
International Filing Date: 4/9/2004  
371(c) Date: 11/15/2005  
Examiner: Steven H. WHITESELL GORDON  
Art Unit: 2851  
Confirmation Number: 9459

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

A copy of each non-U.S. patent document and each non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

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**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(d), before payment of the issue fee, within three (3) months of the foreign office action, and within 30 days of receipt.

**RELEVANCE OF EACH DOCUMENT**

Document D1 is a U.S. counterpart of Document D6.

Document D2 is a U.S. counterpart of Document D5.

Document D3 is a U.S. counterpart of Document D8.

The documents listed on the attached PTO/SB/08 were cited as being relevant during the prosecution of the corresponding Japanese application. A copy of the published WO/02/41196 (Document D4) is not being provided as it was previously submitted in an Information Disclosure Statement filed on October 11, 2005. A partial English translation of the Japanese Office Action of November 18, 2009, follows:

Reference 1 (WO02/41196A1) discloses an exposure apparatus comprising a light source, a pattern generator, a micro lens array, and a grating. As the grating, a shadow mask is shown by way of example but any other appropriate structure may be selected (in particular, see page 9, lines 17-27, Fig. 11).

Reference 2 (JP-A-H05-234846) [corresponding to US Patent No. 6,020,950] discloses, as a light-shielding plate arranged at a pupil plane of a projection optical system, a structure including a quartz plate having a light-shielding portion comprising a metal material and a predetermined opening pattern. Reference 2 also discloses that the light-shielding plate is provided with a cooling mechanism.

Each of the grating in the invention described in Reference 1 and the light-shielding plate in the invention described in Reference 2 is arranged in the projection optical system of an exposure apparatus and has a predetermined opening pattern. In the field of the exposure apparatus, heating of an optical element is a well-known problem. Therefore, it is easily envisaged for those skilled in the art to adopt the structure described in Reference 2 as a structure of the grating in the invention described in Reference 1 and to provide the grating with the cooling mechanism. As the cooling mechanism disposed in the exposure apparatus, a Peltier element is well-known (for example, see [0041] to [0045] in Reference 3 (JP-A-

2001-013297), [0017], [0018] and [0026] in Reference 4 (JP-A-2002-083756) [corresponding to US Patent No. 6,552,308], [0006] and [0040] in Reference 5 (JP-A-2002-124451), and [0060] in Reference 6 (JP-A-H09-022120) [corresponding to US Patent No. 5,894,341].

Any document listed on the attached PTO/SB/08 was cited as being relevant during the prosecution of the corresponding Japanese application. A copy of the Japanese Office Action is attached setting forth the portion of each document considered relevant by the examiner. An English-language counterpart of the foreign-language documents has been provided where readily available. The absence of a translation or an English-language counterpart document does not relieve the PTO from its duty to consider any submitted document (37 CFR §1.98 and MPEP§609). English language abstracts are attached.

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

#### **STATEMENT**

The undersigned hereby states in accordance with 37 CFR §1.97(e)(1) that each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to filing of this Statement.

The undersigned hereby states in accordance with 37 CFR §1.704(d) that each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in 37 CFR §1.56(c) more than thirty days prior to the filing of the information disclosure statement.


#### **FEE**

A credit card payment form in the amount of \$180.00 is enclosed to cover the fee associated with an information disclosure statement under 37 CFR §1.97(d).

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this submission under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date 12/9/2009

By 

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